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FARM MOTOR TRUCK OPERATION IN THE NEW ENGLAND AND CENTRAL ATLANTIC STATES.

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COLLECTION OF DATA.

When a farmer, contemplating the purchase of a machine, is undecided as to its practicability for his use, the experience of other farmers who have owned and used that particular kind of machine should be of value. For the purpose of obtaining reliable information, with which to assist prospective purchasers of motor trucks, several thousand farmers in the New England and Central Atlantic States known to be owners and users of motor trucks were asked in the winter of 1919–20 for detailed information covering the use of these machines in their farming operations. All replies reporting on second-hand trucks, on vehicles converted into trucks by the addition of attachments to passenger cars, on trucks which had been in use less than seven months, and on those used primarily for custom work were excluded from the summary. A complete analysis of the reports from 753 farmer truck owners is given in Department Bulletin 910, " Experience of Eastern Farmers with Motor Trucks."

About 10 per cent of the excluded replies were reports on machines which had been used six months or less. In June and July, 1922, questionnaires on which to record additional facts were sent to the men whose reports were summarized in Department Bulletin 910, and to those whose reports had been excluded from that summary because of insufficient experience. These questionnaires were designed to ascertain what percentage of the trucks covered by the 1920 reports were still in use, what percentage had been replaced by others, the percentage of farmers who had discontinued the use of trucks in their farming operations, and to obtain more definite information as to the life, depreciation, and repair costs of these machines. In general, information was sought which would make possible a comparison of the experience of these truck owners as given in their first reports, which covered a period during which prices for farm products were relatively high, farm labor scarce and high, and conditions generally favorable to the use of trucks by farmers, with their beliefs based on wider experience under changed conditions.

The first reports received in 1920 covered the use of the trucks in 1919, while the later reports received in 1922 were for the use of the machines from June, 1921, to May, 1922, inclusive. For convenience the two reports will be referred to as the "1920" and "1922" reports, respectively.

SUMMARY.

Among the outstanding facts indicated by compilation and analysis of the data collected and used in this bulletin are the following:

The use of a motor truck in many instances enables a farmer to take advantage of better markets at greater distances from his farm than were available when his hauling was done with horses. For those truck owners who have changed markets (see Table 4) the distance to the new markets averaged nearly double the distance to those formerly used.

In the area covered by these reports trucks having a capacity of 1 ton comprised nearly half the total number concerning which replies were received, while slightly over half of the owners who in 1922 gave their opinions as to the size best suited to their conditions stated they preferred the 1-ton machines.

Over 90 per cent of the owners stated they believed their trucks would prove to be profitable investments, and that they intended to purchase others when those reported on were worn out.

Saving of time was given as the greatest advantage, and poor roads as the greatest disadvantage connected with the use of motor trucks.

On the average it requires less than half the time to make a haul of a given length with a truck that it does with horses.

Not all of the road hauling was done with trucks. Over 60 per cent of the owners answering this question stated that they used horses for a small part of their road hauling.

While many owners used their machines for some hauling on the farm itself a large part of such hauling was still done with horses.

A small percentage of the owners stated they did some custom work, but that it constituted on the average only about one-tenth of the total hauling done with their machines.

A majority of the owners estimated that their trucks were used on an average of 147 days, and traveled slightly over 3,100 miles in the year preceding their report.

The expense of operation per mile run (see p. 23) varied from 7.8 cents for the half-ton machines to 20.7 cents for the 2-ton size. The cost per ton-mile for hauling crops (see p. 24) ranged from 37.3 cents for the smaller trucks to 15.8 cents for the larger size.

Over two-thirds of the owners reporting stated their machines had always been ready for use when needed during the preceding year.

The addition of motor trucks to the farm equipment had displaced on the average less than one horse for each machine purchased.

NUMBER AND LOCATION OF TRUCK OWNERS REPORTING.

Three hundred and eighty-six replies to the 1922 questionnaire were received. The number of owners in each State and the size of the farms they were operating at the time of reporting, together with the average size of all farms in the same States according to the 1920 census of agriculture, are given in Table 1.

TABLE 1.—*Number of motor-truck owners reporting from different States, average size of their farms, average number of crop-acres per farm, and average size of all farms.*

	Total number of reports.	Average size of farm.	Average number of crop-acres per farm.	Average size of all farms in State.
		Acres.	*Acres.*	*Acres.*
Maine	10	283	107	112
New Hampshire	12	107	49	127
Vermont	10	314	100	146
Massachusetts	31	152	67	78
Rhode Island	8	94	46	81
Connecticut	10	190	75	84
New York	126	197	139	107
New Jersey	46	131	107	77
Pennsylvania	113	143	100	87
Delaware	6	321	177	93
Maryland	14	238	193	99
All farms	386	173	112	

Of the 386 men reporting, 325, or 84 per cent, owned the same motor trucks upon which they reported in 1920, and stated they were still using them.

Of the 61 men who no longer owned the machines covered by the earlier reports, 50 had replaced them with others, while 11 trucks had not been replaced.

TYPES OF FARMS ON WHICH TRUCKS ARE OWNED.

The farms operated by the 325 men who stated they used their old trucks are of various types and sizes, ranging from truck farms containing in some instances but a few acres to large dairy farms of several hundred acres. They have been classified according to the type of farming practiced as fruit, dairy, truck, crop, and general farms. On those classed as fruit farms, fruit is the principal source of income. Those classed as dairy farms are the ones where dairying is the main enterprise. On the truck farms the raising of vegetables and similar produce predominates. The crop farms embrace those on which general field crops are grown, but where few or no dairy cows are kept and no livestock is raised for sale, while the general farms are those on which no one special enterprise predominates.

The total number in each group, and the average acreages for each group, together with the average distances to the markets ordinarily used before the purchase of the motor trucks and to those used in 1922, for such of the truck owners as reported these facts are given in Table 2.

TABLE 2.—*Number of farms of different types using motor trucks, their average size, and distance to market.*

Type of farm.	Number reporting.	Average size of farm.	Average number of crop-acres per farm.	Average distance to markets usually used—	
				Before purchase of truck	In 1922.
		Acres.	*Acres*	*Miles.*	*Miles.*
General	140	191	124	11.6	13.4
Fruit	57	127	94	10.7	12.6
Dairy	56	228	123	6.2	7.6
Truck	50	76	54	11.8	13.5
Crop	22	191	155	5.8	9.3
All farms	325	170	111	10.1	12.0

The fact that more of the reports are from men operating general farms than from any other group does not indicate that the percentage of such farmers who own motor trucks is larger than that of men who follow special types of farming, but that in the region under discussion there are more general farms than farms of any other type.

In general, there will be more work for a truck on a large farm than on a small one, and a prospective purchaser should remember that if his farm is small he will probably have less hauling for a motor truck than the average of that done by the men reporting.

DISTANCE TO MARKET.

A striking point concerning these farms is their distance from market as compared with other farms in the same section. As shown in Table 2, the average distance to the markets usually used before the purchase of trucks was approximately 10 miles. Of the fruit, general, and truck farmers 19, 18, and 16 per cent, respectively, were 20 or more miles from the markets they generally used before adding motor trucks to their farm equipment.

Farm survey records in the States covered by these reports indicate that only a small percentage of all the farmers in this section are more than 10 miles from market. The average distance from market of 4,271 farms, as shown by records in the Bureau of Agricultural Economics is 4.1 miles, or less than half the average distance reported by the truck owners. Twenty-seven per cent of the truck owners reporting distance to markets were less than 5 miles from the markets used by them before they purchased their trucks, while 69 per cent of the farms covered by the farm survey records were less than 5 miles from market. Forty-four per cent of the truck owners reported using markets 10 or more miles from their farms before buying their machines, while 7 per cent of the farms in the survey group were 10 or more miles from market.

Over one-fourth of the truck owners reporting distance to markets have changed their markets since purchasing their machines, and are now using markets still farther from their farms. (See p. 11.)

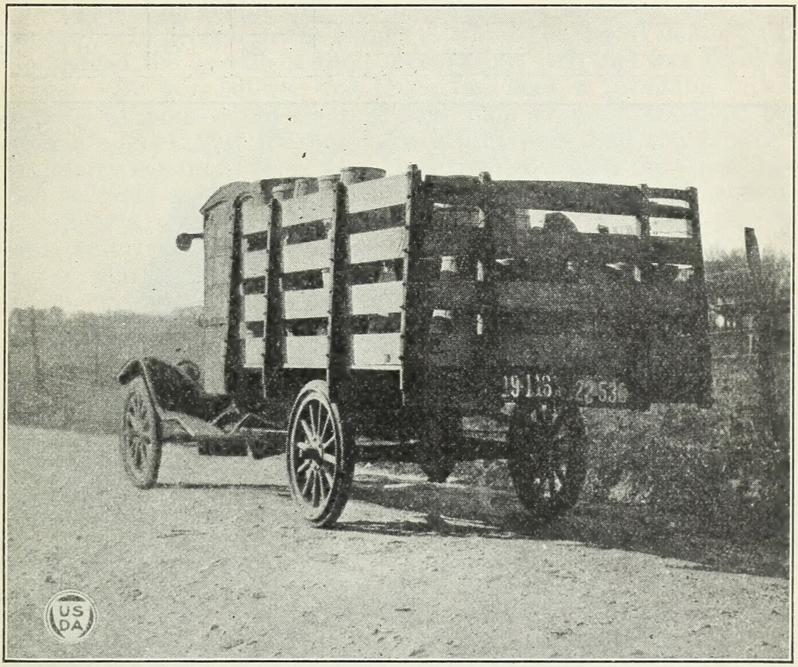

FIG. 1.—Truck hauling requires less than half the time required with horses.

The time required for hauling from and to the farm generally is greatest for those farmers farthest from market, and it is on such farms that most use will be found for motor trucks. (See figs. 1 and 2.) A farmer who is but 2 or 3 miles from market must have an exceptionally large amount of hauling to do in order to make a truck a profitable investment.

SIZE OF TRUCKS.

The number of trucks of different sizes on the 325 farms where the original machines were still in use at the time of reporting in 1922, the average size of the farms on which they were owned, and the average distance to the markets ordinarily used by their owners before the trucks were purchased are given in Table 3.

TABLE 3.—*Number of trucks of different sizes, average size of farms on which they are owned, and average distance to markets ordinarily used before trucks were bought.*

Size of trucks.	Number reporting.	Average size of farm.	Average number of crop acres per farm.	Average distance to markets usually used before purchase of trucks.
		Acres.	*Acres.*	*Miles.*
½-ton	55	161	88	7.0
¾-ton	39	134	82	10.9
1-ton	159	173	111	10.3
1¼ and 1½-ton	33	175	129	8.6
2-ton	39	204	159	13.9
All farms	325	170	111	10.1

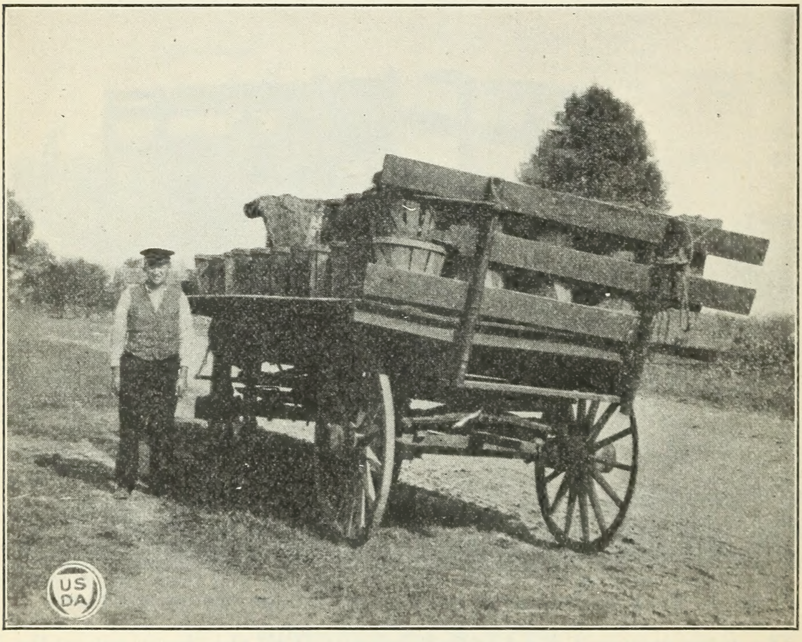

FIG. 2.—The time required for hauling with horses very frequently prevents the farmer from using a more distant but better market.

One hundred and fifty-nine, or 49 per cent, of the total number of motor trucks included in this report were of the 1-ton size. Twenty-nine per cent were smaller and only 22 per cent larger than those having a capacity of 1 ton.

Thirty per cent of the dairy farmers reported the use of the ½-ton trucks and 54 per cent the 1-ton size, while only 2 per cent used the 2-ton machines. Twenty per cent of the men on general farms own ½-ton trucks, while on the crop farms only 14 per cent had trucks smaller than the 1-ton size. Sixty-four per cent of the truck farms and 65 per cent of the fruit farms had trucks ranging from ½-ton to 1-ton in size.

AGE OF TRUCKS.

Approximately two and one-half years intervened between the dates of the 1920 and 1922 reports. The length of time the 325 motor trucks had been in use at the time of reporting in 1922 was as follows:

51 had been in use 36 months or less—average age 35 months.
74 had been in use 37 to 42 months—average age 39 months.
96 had been in use 43 to 54 months—average age 50 months.
67 had been in use 55 to 66 months—average age 61 months.
37 had been in use 67 months or over—average age 82 months.

ARE THESE TRUCKS PROFITABLE INVESTMENTS?

The method of conducting the investigation was such that it was not possible to determine the extent to which the use of motor trucks had changed the income of their owners, but each one was asked the question "Do you believe this truck has been a profitable investment?" Without doubt each of these men expected when he purchased his truck that it would prove profitable, and the replies to this inquiry should at least show the extent to which the trucks have failed to come up to the expectations of their owners. Ninety-four per cent of the 321 men who answered this question stated they believed their trucks would prove profitable, and 96 per cent of the 316 men who answered it in 1920 apparently were satisfied that their investment would prove profitable.

Neither the size of the truck nor the type of farming practiced appear to have had much weight with the owners answering this question, as 95 per cent of the men owning the 1-ton and smaller sizes, and 92 per cent of the remainder stated that they believed their trucks would prove profitable. In 1920 the percentage of satisfied owners was 97 per cent for the 1-ton and smaller sizes and 94 per cent for those over 1 ton.

Ninety-four per cent of the men on the general and truck farms, and all of those on the fruit, dairy, and crop farms stated in 1920 that they believed their trucks would prove profitable investments. In 1922 the replies by type of farming practiced showed that 92 per cent of the general farmers appeared to be satisfied, and over 95 per cent of the truck owners on the other types of farms believed their machines would prove to be profitable investments.

Practically all of these men expected to continue to use their trucks, 98 per cent of the 318 owners who replied to this question stating they expected to use their machines during the remainder of 1922. There was but little difference in the percentage of the owners of the different sizes of trucks who answered this question in the affirmative.

In reply to the question as to whether they intended to buy other trucks when those reported on were worn out, 96 per cent of the 305 replies were in the affirmative.

ADVANTAGES AND DISADVANTAGES OF MOTOR TRUCKS.

There are many advantages in the ownership of a motor truck, but just how great these advantages are, and which should be given the greatest weight, are questions which the man inexperienced in the use of these machines in farming operations can seldom answer. It should be helpful, therefore, for a prospective purchaser to know what men who have used these machines for a considerable period have found to be their advantages and disadvantages in actual practice. These truck owners were asked "What is the principal advantage of a motor truck for farm use?" and "What is the principal disadvantage?"

Nearly 94 per cent of the owners replying to the first question stated that the time saved through use of their trucks was the greatest advantage, while in 1920 the same reply was given by 90 per cent of the men reporting. Other advantages mentioned, in the order of their relative importance, were the saving of horses, convenience, the possibility of going to better markets, and reduction of expense. Long hauls to market over hard roads are more wearing than farm work on most farm horses. The use of a truck not only relieves the horses of this hard labor, but it also leaves them free for work on the farm while the truck does the road hauling. (See figs. 3 and 4.)

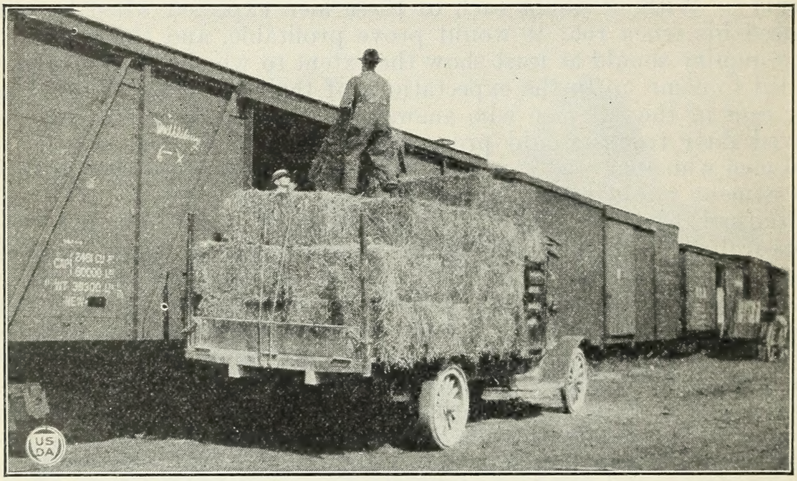

FIG. 3.—Hauling with a truck permits the horses to remain at work on the farm.

Only 1 per cent of these truck owners stated that in their opinion the possibility of going to better markets was the main advantage in the use of motor trucks on their farms, although over one-fourth of the men who reported the distances to the markets used before and after they purchased their machines have changed markets, some of the new markets being twice as far from the farms as were those formerly used. It is probable that in many instances the saving of time effected by the use of the trucks gives their owners sufficient time to enable them to go to the better markets, and also to get their produce to market in better condition than was possible when horses and wagons were used.

The fact that so few truck owners consider any advantage other than the saving of time as the principal one indicates that the amount of time these machines will save is a very important item to be considered by prospective purchasers.

Nearly 44 per cent of the truck owners who stated what they considered were the greatest disadvantages of these machines for farm use gave poor roads the first place; this disadvantage was followed by cost of operation, listed by 18 per cent; and first cost of trucks by 6 per cent. In 1920 these same disadvantages were mentioned by 38, 13, and 5 per cent, respectively, of the truck owners answering the question.

A small percentage in both years mentioned the difficulty or impossibility of using their trucks in soft ground, mechanical trouble, and the difficulty of securing competent drivers for their machines, while 34 per cent of the men reporting in 1920, and 23 per cent of those reporting in 1922, stated that in their experience they had found no disadvantage connected with the use of their trucks.

FIG. 4.—Long hauls to market are hard on horses.

THE BEST SIZE OF TRUCK.

The fact that such a large percentage of the truck owners stated they believed their machines were proving profitable investments does not necessarily mean they are altogether satisfied with the particular trucks owned by them. The hauling which it is planned to do with a truck should be a large factor in determining the size to be purchased. If there is a large amount of hauling to be done and the truck proves too small for a considerable part of it, thus necessitating a much greater number of trips than would be required if larger loads could be carried, it is possible the cost of making the extra trips will offset the difference between the first cost of the truck purchased and one large enough to do the hauling more efficiently. However, if the truck is too large, and in consequence is operated a large part of the time with only a partial load, the possibility of carrying the larger loads on the rare occasions when it is used to full capacity, would probably not justify the extra expense in the cost and operation of the larger size.

In order to obtain information on this point based on actual experience each truck owner was asked to state what he believed to be the best size of machine for his conditions, regardless of the size he owned.

The replies of the 306 men who answered the question in 1922, and of the 304 who replied to it in 1920, are as follows:

	1922	1920
	Per cent.	*Per cent.*
Farmers who recommended the ½-ton size	10	8
Farmers who recommended the ¾-ton size	4	7
Farmers who recommended the 1-ton size	51	48
Farmers who recommended the 1¼ and 1½-ton sizes	16	16
Farmers who recommended the 2-ton size	16	18
Farmers who recommended trucks over 2-tons in size	3	3

Inasmuch as 231, or 71 per cent, of the 325 men reporting (See Table 3) own trucks ranging from 1 to 2 tons capacity, and these sizes are recommended by 83 per cent of the men replying to the question in 1922 and by 82 per cent of those who answered it in 1920, it would seem that ordinarily the choice of a truck purchased primarily for farm use in the section covered by these reports, or in other areas where conditions are similar, might well be one of the four sizes included in the 1-ton to 2-ton group.

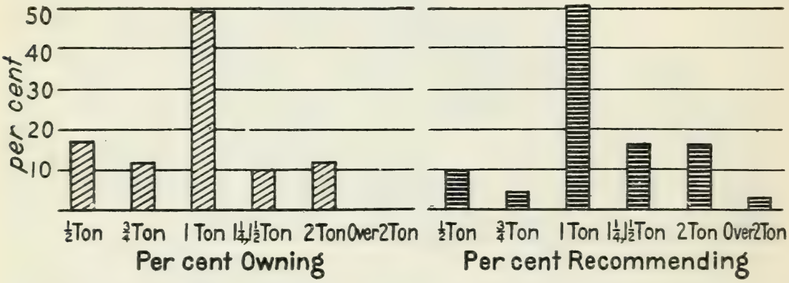

FIG. 5.—Sizes of motor trucks owned and sizes recommended.

The proportion of those reporting who own the different sizes and the proportion who preferred trucks of certain sizes are shown in Figure 5.

CHANGE OF MARKETS.

Good markets are used by many farmers who do not own motor trucks. There are other farmers who would find it difficult to reach better markets than they are now using even if a truck was added to their farm equipment. Slightly over one-fourth of the men reporting concerning the markets used by them stated that after they purchased their trucks they made a change in the markets generally used. However, even though the trucks put new and better markets within reach, some of their owners stated they still used the old market to some extent. The distance to the new markets was in nearly every case considerably greater than to those formerly used. The men who changed markets were on the average 8.9 miles from those they generally used before buying their machines, and 15.7 miles from those they were using at the time of reporting. Sixty-eight per cent of these men were less than 10 miles from the markets they used when they did their road hauling with horses, while after the purchase of their trucks 62 per cent went to markets 10 miles or more from their farms, and one-third of the number went to market 20 or more miles away. A few of the men who in 1920 reported having changed markets stated in 1922 they were taking their produce to and hauling supplies from their old markets. Such men had apparently found that under the conditions existing at the time of their later reports the advantages of the new markets were insufficient to justify their continued use. The percentage of men on the different types of farms who reported using other markets than before buying their machines, with average distances to old and new markets, are shown in Table 4.

TABLE 4.—*Percentage of men on each type of farm who reported changing markets after buying their trucks, with average distance to both old and new markets.*

Type of farm.	Truck owners who reported changing markets.	Average distance to markets used— Before purchase of truck.	Average distance to markets used— At time of reporting.
	Per cent.	*Miles.*	*Miles.*
Dairy	24	5.3	11.0
Truck	25	8.6	15.6
General	26	10.8	17.8
Fruit	33	8.3	14.2
Crop	35	7.0	17.0
All farms	27	8.9	15.7

The reports do not show to what extent the incomes of these men had been increased through the use of their trucks in going to better markets, but from the information voluntarily given on this point it would seem that in some instances at least the increase was sufficient to warrant the owners in believing their machines would prove to be profitable investments.

ROAD HAULING WITH TRUCKS.

A prospective purchaser will want to know how much time he can reasonably expect to save if he does his hauling with a truck instead of with horses. As a large percentage of the men reporting in 1920 furnished information on this point it was not called for in 1922. Figure 6, based on the information given in the earlier reports, makes possible a comparison of the time required for the round trip for distances ranging from 1 to 20 miles when hauling was done in the two ways. The time shown includes that spent in loading and unloading as well as on the road. On the average it requires about 35 to 40 per cent as much time to make a haul of a given length with a truck as it does with horses and wagons.

The saving in time that can be effected by the use of motor trucks will depend, of course, to some extent upon the weight of the loads hauled. The 1920 reports showed that the owners of the smaller trucks usually hauled lighter loads with their machines than with horses, while the reverse was true for the larger trucks, and therefore the time saved by the smaller machines was somewhat less than that indicated by the chart, and greater for the larger ones.

The average weight of the load for the ½-ton trucks, when crops were being hauled according to the reports of their owners, was a little less than a half ton. The average load hauled by the same men with horses was three-fourths of a ton. The average load of crops hauled with the ¾-ton trucks was slightly under a ton, or 15 to 20 per cent less than was formerly hauled with horses. There is no great difference in the size of the loads hauled by the owners of the 1, 1¼, to 1½ ton trucks and by the same men with their horses.

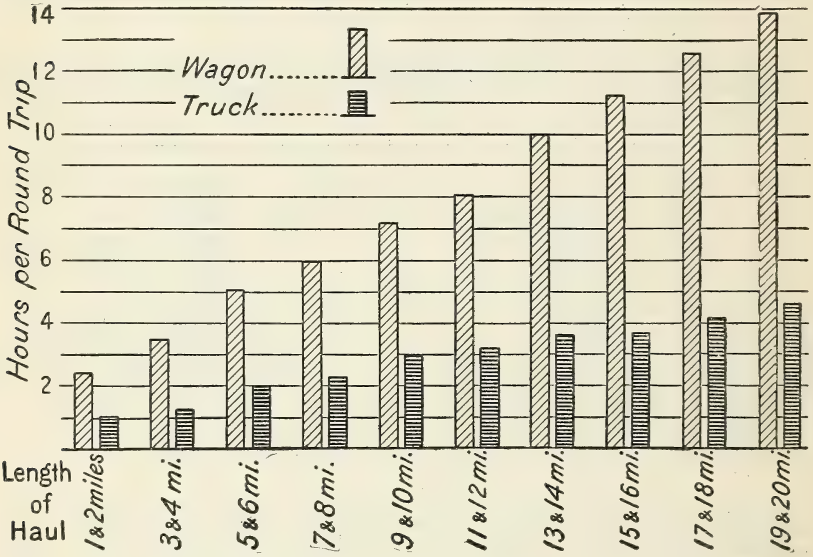

FIG. 6.—Comparison of time required (hours per round trip) for hauling different distances with trucks and with wagons.

The 2-ton trucks hauled approximately 2½ tons of crops per load, or about 10 per cent more than was considered a load for the horses.

With the exception of milk, the average loads of the other materials hauled by the various sizes of trucks, and by horses, were approximately the same as the weights of crops hauled. Milk hauled from these farms by trucks was carried almost entirely on the ½ to 1 ton machines, as less than 8 per cent of the trucks on the 129 dairy farms from which reports were received in 1920 had trucks larger than 1 ton in size. The ½-ton trucks hauled on an average 600 pounds of milk per load, and the ¾ and 1 ton trucks about 1,300 pounds, there being little difference in the weight of the loads carried by the last-mentioned two sizes of machines. These loads are nearly the same in weight as those formerly hauled by horses.

The 1922 reports show that the dairy farmers are nearer to the markets used by them than are the truck owners on the other types of farms. (See p. 11.)

RETURN LOADS.

The percentage of time which a truck is run without a load has a direct influence on the cost per unit of hauling with it. If the owner hauls a load of produce to market and takes back a load of supplies to the farm on the return trip he reduces the expense and time spent in hauling practically half. (See fig. 7.) The reports of the men who gave information on this point in 1920 showed that, on the average, they had loads both ways for their trucks on about 26 per cent of their trips. Thirty per cent of the owners, however, stated they never had return loads. The fruit, truck, and crop farmers reported having return loads for their machines a much smaller percentage of the time than did the dairy and general farmer.

FIG. 7.—Return loads reduce the expense of hauling.

ROAD HAULING FOR WHICH TRUCKS ARE NOT USED.

It does not necessarily follow that because a farmer owns a motor truck he can do all his road hauling with it. The reports from 61 per cent of the 310 owners of these machines who answered the question "Did you use horses for any hauling on the road (that is, from and to the farm) in 1921?" stated that they did, the average of such hauling with horses being about 17 per cent of the total road hauling done. On this basis, for all farms reporting, about 10 per cent of the total road hauling was done with horses, and the remainder with trucks.

No inquiry was made concerning the reasons for using horses for road hauling, but in 1920 about two-thirds of the truck owners reporting stated they used their horses to some extent for road hauling, and of this number nearly half gave as their reason for so doing that it was necessary to do such hauling at times when the roads would not permit the use of their trucks. Of the balance, about an equal number stated their reasons for using horses for road hauling was that their truck bodies were unsuitable for carrying the particular material they desired to haul, or that their trucks were too light. The latter reason, however, was not advanced by any of the owners of trucks over 1 ton in size.

A small percentage of the total number stated that they used their horses when their trucks were busy, and others said that as it was necessary to keep some horses anyway, they were used for some of the road hauling at times when otherwise they would have been idle.

EFFECT OF DIFFERENT KINDS OF ROADS ON USE OF MOTOR TRUCKS.

Poor roads, given by such a large percentage of truck owners as the greatest disadvantage connected with their use, are in a large measure responsible for the continued use of horses for part of the road hauling done by truck owners. The 1920 questionnaire asked each truck owner to state the kind of roads over which his truck usually traveled, and the length of time during the preceding year that the condition of the roads had prevented him from using his machine. The replies to these two questions should give the prospective purchaser a definite idea of the difficulties he is likely to encounter.

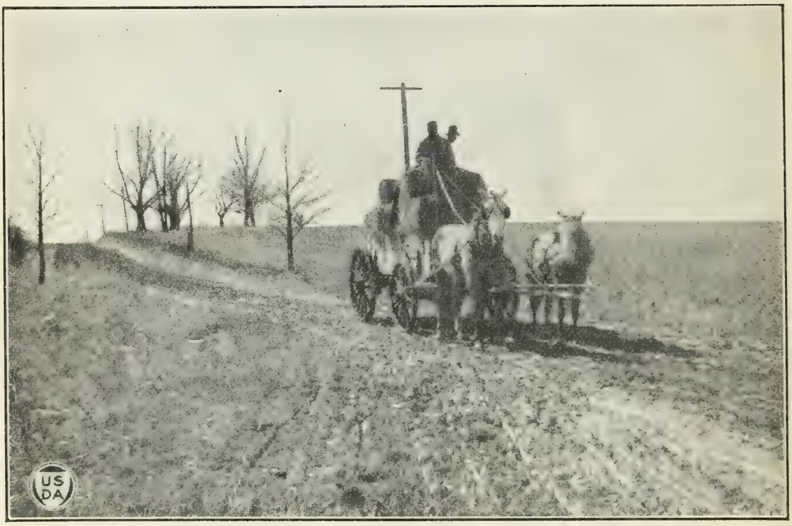

FIG. 8.—A road which may be impassable for several weeks of each year.

Twenty-nine per cent of the men replying stated that their trucks usually traveled on dirt roads, 46 per cent on roads that were part dirt and part improved, and 25 per cent on wholly improved roads, such as macadam, gravel, or better.

The 1920 reports showed that on the average there were about two months in the preceding year when the roads were in such condition, because of mud, snow, etc., that the trucks could not be used. This does not mean, however, that horses were always used for road hauling when the roads were impassable for trucks, as in some cases no road hauling was necessary at such times.

On the average there were 10.7 weeks during the year when the trucks which usually traveled on dirt roads only could not be used, 7.8 weeks when those which run on part dirt and part improved roads could not be used, and 3.5 weeks when those driven only on improved roads could not be used.

In all, less than one-fourth of the truck owners had found it possible to use their machines every week in the year, while between 35 and 40 per cent stated there were over 8 weeks out of the 52 when they could not use them. About 50 per cent of the men with wholly improved roads stated they could use their trucks every week in the year as compared with 9 per cent of those with all dirt roads who could do so. There were over 8 weeks during the year when 55 per cent of the men with all dirt roads were unable to use their machines. Snow was probably the main cause of the wholly improved roads being impassable for trucks at least 1 week in the year.

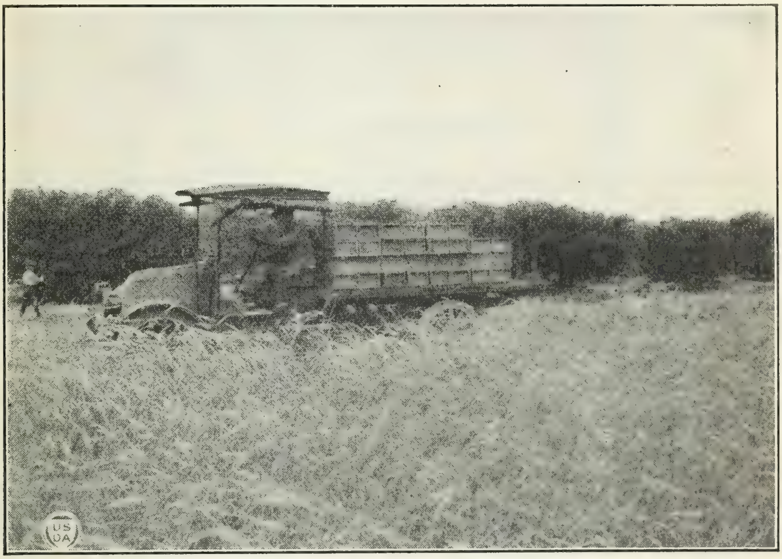

FIG. 9.—The truck can often be used to advantage for hauling on the farm.

The reports indicated that the kind of tires with which the trucks were equipped apparently had little to do with the length of time they could not be used on account of the condition of the roads.

HAULING ON THE FARM WITH TRUCKS.

Although farm-owned motor trucks are used to a much greater extent for road hauling than for any other purpose, they can in some instances be used to advantage for part of the hauling on the farm itself. (See fig. 9.) Approximately 60 per cent of the reports showed that some of the hauling on the farm was done with trucks, while about 29 per cent of the truck owners who furnished information on this point in 1920 stated that they used their machines to some extent for such work. No information was obtained as to the proportion of the total hauling in the field and around the buildings that was done with trucks, but the 1920 replies from the comparatively small number of men who at that time reported using their trucks for this work showed that they did a large part of their farm hauling with horses. Some of the smaller machines are too light to carry the loads to be hauled, some have bodies unsuited to the material to be moved, and sometimes the ground is so soft as to make it difficult, if not impossible, to use trucks.

The time saved was mentioned more frequently than any other reason by the men who in 1920 stated they did some of the hauling on their farms with trucks instead of with horses. However, a large part of the time required for hauling on the farm is spent in loading and unloading, and but a comparatively small portion of it in actual travel, and consequently the percentage of the total time which can be saved by using a truck for such hauling is small as compared with that saved when using it for road hauling. Then, too, if horses which would otherwise remain idle are available, it would seem more profitable to use them in those cases where nothing would be gained by using the trucks.

CUSTOM HAULING.

As stated on page 1, reports from men using their trucks primarily for custom work, and only incidentally for farm work, were omitted from this summary. However, of the 305 men who answered the question "Did you do custom work (hauling for hire) with your truck in 1921?" 55 stated they used their trucks to some extent in this manner. In 1920, 78 out of 235 truck owners gave the same answer. The men who in 1922 reported doing some custom work were asked what percentage of the total hauling done with their machines was for hire, and the replies indicated that only one-tenth of it was of this nature. It is probable that most farmers owning motor trucks can obtain custom work if they so desire, and if their time is not fully occupied with their own work they can increase their incomes by using their trucks in this manner. However, when such work was done largely for the accommodation of neighbors, as shown by the 1920 reports, the charge made for it in many cases was too low to make it profitable.

ANNUAL USE OF TRUCKS.

As the number of miles per year which a truck travels has a direct bearing upon the cost per mile run and per ton hauled, a prospective purchaser of such a machine should give considerable thought to the amount of use he will probably have for it. The quantity of material to be moved, the size of the truck, and length of haul will all have an influence on the total distance covered by a truck annually. Depreciation and repairs tend to increase somewhat as the annual mileage increases, but in general the greater the distance traveled, or the larger the amount of material hauled, the smaller will be the charge per mile run, or per ton moved, for these items.

In 1920, 230 truck owners estimated the average distance their machines traveled during the preceding year to have been 3,518 miles. The distances which 274 of the 325 truck owners reporting in 1922 estimated that their machines traveled in the preceding year are shown in Figure 10. The average distance traveled in that year by all the trucks, according to these estimates, was 3,137 miles. The average distance traveled during the year by each of the different sizes of trucks, was as follows:

	Miles.
½-ton trucks	3,349
¾-ton trucks	4,166
1-ton trucks	2,698
1¼ and 1½-ton trucks	3,001
2-ton trucks	3,599

According to the reports the average distance traveled during the preceding year by trucks of each size was less than in 1919. This difference ranged from 281 miles for the 2-ton machines to 387 miles for the 1-ton size. For all sizes the decrease averaged 381 miles.

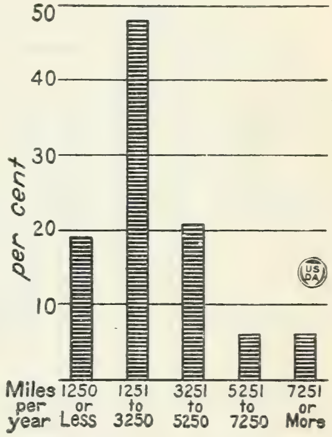

FIG. 10.—Percentage of motor trucks which travel different distances per year.

Each truck owner was asked to state the number of days on which his truck was used per year, the replies to be based not on the number of full day's work done, but to include all days on which some use was made of it. Two hundred and seventy-seven of the men reporting estimated the number of days on which some use was made of their machines during the preceding year, and the average of those estimates was 147 days. The ½-ton machines were used on the greatest number of days, and the 2-ton trucks on the smallest, the averages being 217 days for the smaller and 105 days for the larger machines.

In 1920, information of a similar nature was given by 275 truck owners. The average number of days in 1919 on which some use was made of their machines was 160. As in 1922, the ½-ton trucks were used on the greatest number of days, and the 2-ton machines on the smallest, the averages being 215 and 123 days, respectively.

The average distances traveled per day for the days the trucks of all sizes were actually used, based upon the replies given in the respective years, was 21.3 miles in 1922, and 21.9 miles in 1919.

When the reports were grouped according to type of farming practiced it was found that the trucks on the dairy and truck farms were used very nearly the same number of days, and traveled approximately the same distance in 1922 as in 1919. A comparison of the use made of the trucks on the different types of farms showed that those on the dairy farms were used on the most days and those on the crop farms the fewest, the average days and miles for these two types of farms according to the 1922 reports being 220 days and 3,309 miles for the trucks on the dairy farms, and 96 days and 2,656 miles for those on the crop farms. Although the machines on the crop farms were not used on nearly as many days, nor did they cover as many miles in 1922 as in 1919, the number of miles run per day used was materially increased. According to the 1922 reports the trucks on the general and fruit farms were used on a smaller number of days, and traveled over 500 miles less during the preceding year than in 1919.

COST OF OPERATION.

FIRST COST.

The average first cost of the trucks of different sizes concerning which reports were received in 1922, including extra equipment bought for use with them, was as follows:

½-ton trucks	$599
¾-ton trucks	1,315
1-ton trucks	945
1¼ and 1½-ton trucks	2,091
2-ton trucks	2,573

Frequently the quoted price of a truck does not include some equipment which is necessary or desirable to have for use with it, as is shown by the statements of about 72 per cent of the truck owners who furnished information on this point. One hundred and ninety-four men reported buying such extra equipment and the average amount spent for it was about $84. In some cases the money was spent for minor attachments costing but a few dollars, while in others cabs or bodies had been purchased, and the added investment in the more expensive extras sometimes ran as high as $300. The cost of trailers bought by a few of the truck owners reporting was omitted from the amount spent for extra equipment.

LIFE OF TRUCK.

The average life of the trucks of all sizes included in this summary, based on the average length of time they had been owned and used at the time of reporting, and the estimates of their owners as to their remaining life, will be 8.5 years, whereas these same men in 1920 estimated that the average life of their trucks would be 6.7 years. It would seem, therefore, that the longer use of these machines has led a considerable number of their owners to believe that they will give satisfactory service for a longer period than in the light of their shorter use had seemed probable. The average estimated life of the trucks of different sizes will be as follows:

	Years.
½-ton trucks	8.3
¾-ton trucks	8.2
1-ton trucks	8.1
1¼ and 1½-ton trucks	9.1
2-ton trucks	10.4

The estimated remaining life of a truck depends not only upon its condition at the time of reporting and the probable amount of work it will do and the care it will receive, but also upon the owner's belief as to when it will be cheaper to discard it and buy a new one than to spend more time and money on it for repairs. There is, of course, a wide variation in the individual estimates, but the averages shown will give the prospective purchaser a fairly definite idea of the amount of service he may reasonably expect from such a machine, and they also furnish the best available basis for figuring depreciation costs.

DEPRECIATION.

The average first cost (including extra equipment purchased) of the trucks of different sizes divided by the average life of the respective sizes gives the annual depreciation costs. The annual charges for depreciation (also for interest, registration and license fees, and repairs) divided by the average annual mileage gives the charges per mile of travel for the items mentioned.

Below are given the annual depreciation charges based on the estimated life of the trucks, and the depreciation charge per mile of travel based on the average annual mileage (see p. 17) for the trucks of various sizes:

	Annual depreciation charges.	Depreciation charge per mile of travel (cents).
½-ton trucks	$72	2.1
¾-ton trucks	160	3.8
1-ton trucks	117	4.3
1¼ and 1½-ton trucks	230	7.7
2-ton trucks	247	6.9

For the ½ and ¾-ton sizes the depreciation charges as shown above are greater than the combined cost of fuel and oil used by them, while for the 1-ton and larger sizes the depreciation charges are greater than for fuel, oil, and tires. (See fig. 11.)

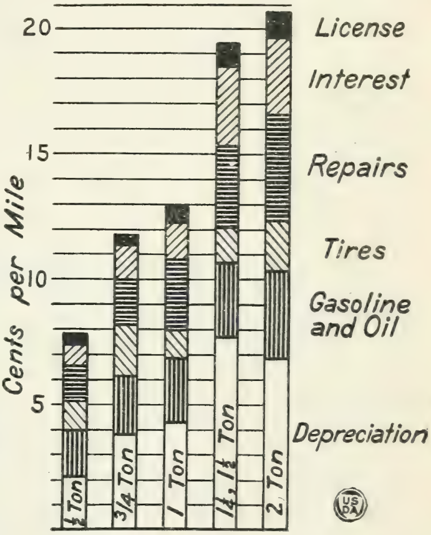

FIG. 11.—Cost per mile of operating motor trucks of different sizes.

INTEREST.

Interest has been computed at 8 per cent on the average investment. The generally accepted method for determining the average investment in equipment where a part of the first cost is charged off each year has been followed. That is, the first cost has been multiplied by the years of service plus one, and this result has been divided by the years of service multiplied by two. Interest calculated by this formula is slightly higher than when computed on half the first cost of the equipment. On the basis given the average interest charges for the several sizes of trucks are as follows:

	Average annual interest charges.	Average interest charge per mile of travel (cents).
½-ton trucks	$27	0.8
¾-ton trucks	59	1.4
1-ton trucks	42	1.5
1¼ and 1½-ton trucks	93	3.1
2-ton trucks	113	3.1

REGISTRATION AND LICENSE FEES.

There is considerable variation in the registration and license fees in the different States, but the following charges are based upon the averages for the year 1922 in the 11 States included in this investigation:

	Average annual registration and license fees.	Average registration and license fees per mile of travel (cents).
½-ton trucks	$12	0.4
¾-ton trucks	15	.4
1-ton trucks	18	.7
1¼ and 1½-ton trucks	30	1.0
2-ton trucks	36	1.0

REPAIRS.

As with various other items connected with the use of motor trucks, a wide variation in the repair costs for individual trucks of the same size and age was shown. However, the averages given will show the prospective purchaser what trucks in actual use for different periods of time have cost their owners in the way of repairs. It is to be expected that the repair costs will be higher for the larger machines, and that they will increase as the trucks become older. Under ordinary circumstances, and barring unusual accidents, the repair costs during the first year or two of a truck's life will be low.

Each truck owner was asked to state the amount spent on it for repairs from the time he purchased it to the time of reporting, exclusive of the cost of new tires. Two hundred and eighty-five of the men reporting in 1920 gave the amount they had spent for repairs to that time, and 259 of the men who furnished information in 1922 stated the amounts they had spent for repairs on their machines from the time of purchase to time of reporting in that year.

Of the 285 men who reported in 1920, 45 had owned their trucks six months or less, and 29 of that number had spent nothing for repairs, while the average amount spent by the 16 making repairs had been $5. Sixty-seven men had owned their machines from 7 to 12 months; 28 of these men had spent nothing for repairs, while the average expense for the 39 who had made repairs had been $18. Eighty-five owners had had their machines from 13 to 24 months, and of this number 11 had had no repair bills: the average amount spent by the 74 men making repairs was $43. Eighty-eight trucks concerning which reports were received in 1920 were over 2 years old, and something had been spent for repairs on all of them. For the 57 machines from 25 to 36 months old the average repair charge was $90, and for the 31 trucks which had been owned 37 months or longer the average amount spent for repairs was $219.

None of the trucks reported on in 1922 had been in use less than 32 months at that time. Of the 259 owners who reported repairs in 1922, 108 had owned their machines from 32 to 42 months, and their average repair costs from the time of purchase had been $85.

Seventy-three had owned their machines from 43 to 54 months, and their average repair bill from time of buying their trucks had been $104. The average repair bills for the 54 men who had owned their machines from 55 to 66 months was $165, while for the 24 men who had owned their trucks 67 months or longer the average expense for repairs had been $335.

As the repair costs for the trucks which had been in use from 43 to 54 months had been $104 the annual repair bills had averaged about $25. It is evident that the average annual repair cost for the entire life of the machines will be higher than the figure given, and, therefore, in the absence of more accurate data the following allowances have been made as fair charges for the average annual repair costs in figuring the cost of operation of these machines for their assumed life:

	Average annual repair costs.	Average repair costs per mile of travel (cents).
½-ton trucks	$50	1.5
¾-ton trucks	75	1.8
1-ton trucks	75	2.8
1¼ and 1½-ton trucks	100	3.3
2-ton trucks	150	4.2

GASOLINE AND OIL.

The average number of miles per gallon of gasoline for the different sizes of machines was approximately the same in 1922 as in 1920, that is, 15.2 miles for the ½-ton, 11.9 miles for the ¾-ton, 10.9 miles for the 1-ton, 9.1 miles for the 1¼-ton and 1½-ton, and 8 miles for the 2-ton trucks. The expense per mile for the lubricating oil for these machines is but a small part of the cost of operating them, and their owners were not asked concerning it. The cost per mile of the grease used would ordinarily be so trifling that no inquiries were made concerning it.

In 1920 the owners of the ½-ton trucks stated that their machines averaged 59 miles per quart of lubricating oil; the ¾-ton trucks, 58 miles; the 1-ton trucks, 48 miles; the 1¼-ton and 1½-ton trucks, 49 miles, and the 2-ton trucks, 40 miles. The cost of lubricating oil, as shown in this summary, is based upon these amounts.

The price of gasoline to farmers in the area covered was approximately 25 cents per gallon. The average price of lubricating oil of the quality commonly used by these truck owners was probably not far from 65 cents per gallon. On this basis the total cost per mile for gasoline and lubricating oil for the trucks of the different sizes would be as follows:

	Cents.
½-ton trucks	1.9
¾-ton trucks	2.4
1-ton trucks	2.6
1¼ and 1½-ton trucks	3.0
2-ton trucks	3.5

TIRES.

In 1920 each truck owner was asked to state with what kind of tires his truck was equipped, what he paid for them, what mileage he obtained in their use, and the kind of tires he then preferred. The replies showed that 36 per cent of the men reporting on machines of different sizes used pneumatic tires, 33 per cent solids, and 31 per cent used pneumatics in front and solids in the rear. In the 1920 reports, 50 per cent stated they preferred pneumatics, 41 per cent preferred solids, and but 9 per cent preferred the combination. The owners of the 1-ton trucks were about evenly divided in their choice as between pneumatics and solids, while about one-sixth of the men reporting on this size recommended pneumatics in front and solids in the rear. Pneumatics were preferred by a large part of the men owning trucks smaller than 1 ton, and solids were given the preference by a large percentage of the owners of machines over 1 ton in size.

The replies received in 1920 also indicated that pneumatic tires on 318 trucks averaged 4,500 miles, while the reports from 206 men showed that the solid tires on their machines averaged about 8,200 miles.

A comparison of the prices of truck tires in June, 1922 (the month in which the 1922 investigation was begun) with the 1919 prices showed that in 1922 the first cost of pneumatic tires similar to those with which the trucks reported on were equipped was about 70 per cent of the 1919 prices, while the solid tires cost about 80 per cent as much as in 1919. On this basis the charges per mile traveled by the two kinds of tires on the trucks of different sizes, after making allowance for the tires with which they were equipped when purchased, and not including the cost of inner tubes for the pneumatic tires, would be as follows:

	Cents.
½-ton trucks, pneumatic tires	1. 1
¾-ton trucks, pneumatic tires	2. 0
1-ton trucks, pneumatic tires	1. 1
1-ton trucks, solid tires	1. 0
1¼ and 1½-ton trucks, solid tires	1. 4
2-ton trucks, solid tires	2. 0

So many of the ½-ton and ¾-ton trucks were equipped with pneumatic tires that no figures for solid tires on these sizes are given, and so few of the trucks over 1 ton in size had pneumatics that only the cost of solid tires for the larger sizes are shown. A large percentage of the 1-ton machines were equipped with smaller tires than were many of the ¾-ton trucks, which fact accounts for the average tire cost for the 1-ton trucks being lower than for the ¾-ton machines.

AVERAGE TRUCK COST PER MILE RUN.

The average cost per mile of operating trucks of different sizes, as shown in the preceding pages, is summarized below. The items included are depreciation, interest on investment, registration and license fees, repairs, gasoline and oil, and tire costs. The tire costs are for pneumatics on the 1-ton and smaller sizes, and solids on the larger sizes. (See fig. 11.) No information was obtained as to the cost of taxes, housing, insurance, labor of owners in caring for the trucks, grease, nor inner tubes for pneumatic tires. Full insurance of a truck covering fire, theft, liability, and property damage is quite costly, but most farmer truck owners do not carry such insurance. Ordinarily the total expense for the omitted items (exclusive of insurance) would be but a small part of the total cost of operating the machines. The average truck cost per mile traveled for each of the different sizes of machines, according to the itemized figures already given, would be as follows:

	Cents.
½-ton trucks	7.8
¾-ton trucks	11.8
1-ton trucks	13.0
1¼ and 1½-ton trucks	19.5
2-ton trucks	20.7

COST OF HAULING WITH MOTOR TRUCKS.

The cost of hauling with a motor truck is determined by the cost of operating it, the charge made for the driver's time and labor, the size of the load hauled, and the percentage of time the machine runs without a load. In computing the cost of hauling with trucks the charge for the driver is based upon an allowance of 25 cents per hour for his time while loading, driving, and unloading the truck. The average time required for hauling, including loading and unloading, as given by the truck owners in 1920, was 0.14 hour per mile of travel for the ½-ton and ¾-ton trucks, and 0.15 hour for the 1-ton and larger sizes. The charge for the driver, therefore, would be 3.5 cents per mile traveled by the ½-ton and ¾-ton trucks, and 3.8 cents per mile traveled by the 1-ton and larger sizes. The total cost per mile run, then, would be as follows:

	Cents.
½-ton trucks	11.3
¾-ton trucks	15.3
1-ton trucks	16.8
1¼ and 1½-ton trucks	23.3
2-ton trucks	24.5

It is stated on page 13 that the trucks reported on in 1920 had return loads on about 26 per cent of the trips made by them. This means that on the average the trucks haul loads when going from and returning to the farm on 26 out of every 100 round trips, and run without a load on 74 one-way trips. To obtain the actual cost per mile of haul, the cost of operating the truck, and the value of the driver's time, for the 74 trips with no load must be charged against the 126 trips with loads; that is, every 126 miles of haul must bear the expense of 200 miles of travel, or every 63 miles of haul must bear the expense of 100 miles of travel. The cost per mile of haul as given below is obtained by multiplying the total cost per mile run by each size of truck by 100 and dividing the product by 63.

On the basis stated, the average cost per mile of haul with trucks of different sizes would be as follows:

	Cents.
½-ton trucks	17.9
¾-ton trucks	24.3
1-ton trucks	26.7
1¼ and 1½-ton trucks	37.0
2-ton trucks	38.9

The average weight of the load of crops hauled with the ½-ton trucks as given by their owners in 1920 was 0.480 ton; with the ¾-ton trucks, 0.926 ton; with the 1-ton trucks 1.196 tons; with the 1¼-ton and 1½-ton trucks, 1.734 tons; and with the 2-ton trucks 2.464 tons. The average cost per ton-mile for hauling crops, therefore, obtained by dividing the cost per mile of haul by the weight of the load in tons (see fig. 12), would be as follows:

	Cents.
½-ton trucks	37. 3
¾-ton trucks	26. 2
1-ton trucks	22. 3
1¼ and 1½-ton trucks	21. 3
2-ton trucks	15. 8

A comparison of the cost of using motor trucks by the farmers reporting shows that the total cost per mile run in 1922 was lower for each size of truck than it was in 1920. The decrease for the respective sizes was as follows: For the ½-ton trucks, 4.1 cents; for the ¾-ton trucks, 4.3 cents; for the 1-ton trucks, 4.1 cents; for the 1¼-ton and 1½-ton trucks, 3.1 cents; and for the 2-ton trucks, 5.2 cents. The cost per ton-mile for hauling crops was likewise reduced by the following amounts: For the ½-ton trucks, 13.5 cents; for the ¾-ton trucks, 7.4 cents; for the 1-ton trucks, 5.5 cents; for the 1¼-ton and 1½-ton trucks, 2.9 cents; and for the 2-ton trucks, 3.3 cents.[1] For some items the same figures were used in both years, as, for instance, the annual repair charge, cost of lubricating oil, per cent of time trucks were run without a load, average weight of load of crops, etc. Some of the other items were lower, and some were higher in 1920 than in 1922. The only change in the average first cost of the machines is that due to a difference in the number of replies used in the summaries for the two years, but the longer period of usefulness as given by the 1922 reports made the depreciation charges lower in that year. The average distance the trucks traveled in 1920 was greater for each size than in 1922. Interest in 1920 was computed at 6 per cent, and in 1922 at 8 per cent on the average investment for the respective years. The registration and license fees were from $2 to $10 higher in 1922, but the cost of fuel was 2 cents per gallon less. The cost of tires was also from 20 to 30 per cent lower in 1922, and the charge for the driver was half as much as in 1920. All these changes affect the total cost, and make the reduced expense as shown above.

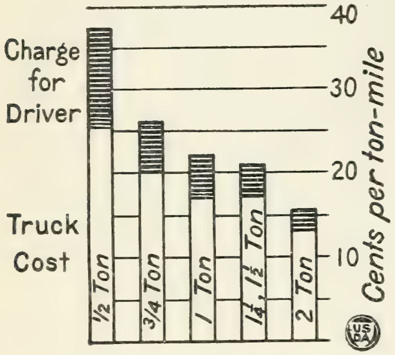

FIG. 12.—Cost per ton-mile of hauling crops with motor trucks of different sizes.

RELIABILITY.

The reliability of a motor truck, as of any other machine, determines in a large measure its profitableness. If it is out of order several days at a time when it is needed, and its owner is depending upon it to help through a busy period, it can hardly be regarded as a profitable machine for him to own.

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[1] A direct comparison between the 1922 averages and those of 1920 as reported in Department Bulletin 910 is not possible, since the former report is based on 753 replies while this report covers only 325 replies. The above comparisons are based on averages of the 325 replies covering both years.

For the purpose of obtaining definite information as to the reliability of motor trucks for farm use these truck owners were asked in 1920 and again in 1922 to give the number of days their machines had been out of commission when needed during the preceding year.

In 1922, 306 of the 325 men who were still using their original trucks replied to the inquiry. Two hundred and eighteen, or 71 per cent, of the owners stated their machines had always been ready for use when needed during the preceding year, 62 had been out of commission for periods ranging from 1 to 5 days, 20 had been out of order from 6 to 10 days, and 6 had been out of commission over 10 days, or an average of nearly 24 days for each of the last-mentioned machines. All of these trucks had been in use 32 months or more at the time the reports were made. Two hundred and ninety-five of the same 325 men had in their 1920 reports given the number of days their trucks had been out of order when needed in 1919. Of that number, 220, or 75 per cent, stated their machines had always been ready for use when needed in 1919, while the remaining 25 per cent had been out of commission on an average of 5.49 days during the preceding year. According to the 1922 reports the time the 88 trucks had been out of commission during the preceding year averaged 5.53 days.

To a certain extent the reliability of a motor truck depends upon the ability of the operator, and the care it is given. A very large part of these trucks were operated by their owners or some member of the family, and it is to be expected that under such circumstances reasonable care would be given the machines, and that they would be operated intelligently. The fact that automobiles are owned on a large percentage of these farms, and tractors on nearly half of them, indicates that most of the men driving the trucks have had more or less experience in the operation of similar machines; and this experience probably accounts to a considerable extent for the small amount of trouble most of the trucks have given their owners.

SAVING OF HIRED HELP.

Ninety per cent of the truck owners reporting in 1920, and nearly 94 per cent of those reporting in 1922, stated that the saving of time made possible by the use of their machines was the greatest advantage connected with their use. This saving of time, however, will be of little financial benefit to a truck owner unless he uses the time for other work, or unless it enables him to dispense with some of his hired labor.

No information was obtained regarding this saving of hired help, as there had probably been little, if any, change in this regard since the making of the earlier reports. In 1920 each truck owner was asked "Has the truck reduced your expense for hired help, either man or horse?" and "If so, how much per year?" The replies of 711 men to this inquiry as given in Department Bulletin 910 showed that nearly four-fifths of the number answered in the affirmative, and the remainder in the negative. Of the 562 men who stated their trucks had made possible a saving in expense for hired help about

62 per cent estimated the amount thus saved, which amounted, on the average, to $324. This figure, however, can hardly be taken to represent the actual amount by which their labor bills had been reduced but rather as an average of the estimate of the amounts by which these bills would have been increased at the usual rates paid for such labor at that time if they had not owned trucks, and if they had been doing the same amount of work that they did after buying their machines.

It must be remembered, of course, that the wages paid for farm labor were considerably higher at the time the 1920 reports were made than at the present time (1922), and that the average saving for hired help which might be possible at this time would be somewhat less than the amounts given.

Eighty-four per cent of the operators of fruit farms reported that their trucks reduced their expense for hired help, and the average saving was placed at $364. The percentage of truck owners on fruit farms reporting a saving in the expense for hired help was slightly higher than on any of the other four types of farms.

There is little difference in the percentage of the owners of the different sizes of trucks who stated their machines had not reduced their bills for hired labor. On the other hand, for those men who reported that their machines had been instrumental in reducing their labor bills there was a decided difference in the estimates of the amounts saved by the use of trucks of different sizes. The average of the estimates of the owners of the 1-ton and smaller sizes who reported a reduction was between $250 and $300, for the 1¼ and 1½ ton trucks the average saving was given at between $375 and $400, while the owners of the 2-ton and larger sizes estimated their saving at more than $600.

DISPLACEMENT OF HORSES.

While the addition to the farm equipment of a motor truck purchased primarily for hauling produce from and supplies to the farm will in some instances result in a reduction in the number of horses needed, the reports received from owners of these machines show that in many cases no change is made in the work stock kept. On the smaller farms where but one or two horses are ordinarily kept they will generally be needed for work on the farm itself.

In 1920 these truck owners were asked to state the number of horses they were keeping at that time, and the number disposed of after they bought their machines. In 1922 they were asked regarding the number kept at that time. Complete replies were received from 255 men in both years.

The number of horses kept on the individual farms before the trucks were purchased ranged from none on one small farm to 21 on a very large one. Eighty-two per cent of the men stated they had kept 6 head or less, and the average for the 255 farms was 4.75 head before trucks were purchased.

Between the time of buying their trucks and making their 1920 reports 114 of the 255 men reporting stated that they disposed of a total of 202 horses, or an average of 1.77 head for each of the 114 farms, or an average displacement of less than one head for each truck purchased.

There was practically no further reduction in work stock during the two and one-half years intervening between the two reports, as in 1920 the average number kept per farm was 3.95, and in 1922 it was 3.78.

FARMS ON WHICH BOTH TRUCKS AND TRACTORS ARE OWNED.

Three hundred and seven of the 325 truck owners whose reports are summarized in this bulletin replied to the inquiry as to whether or not they owned tractors as well as motor trucks. One hundred and thirty-eight, or 45 per cent of these men, stated they did, and the remaining 169 said they did not own tractors. In 1920, 322 men answered a similar question, and of this number 83, or 26 per cent, owned tractors, and 74 per cent did not. Of the 138 tractor owners 107 gave information regarding the size of their farms and the number of horses kept, while 133 of the 169 men who stated they did not own tractors gave similar information. There was an average of approximately 151 crop-acres per farm in the 107 farms where tractors were owned, and 81 crop-acres in those farms where tractors were not owned. The crop acres per horse in those farms where both tractors and trucks were owned averaged 35, and 24 where trucks but not tractors were owned.

Both motor trucks and tractors were owned on 75 per cent of the crop farms, 66 per cent of the fruit farms, 48 per cent of the dairy farms, 37 per cent of the general farms, and 27 per cent of the truck farms.

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